CAPITAL DISTRICT TIMEX/SINCLAIR COMPUTER CLUB

ALBANY, NEW YORK

SEPTEMBER 1990

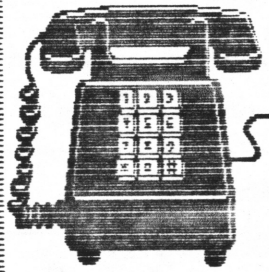
NEXT MEETING

TUE. 18 SEPT. 1990

WED 17 OCT 1990

THUR. 15 NOV. 1990

TIME 7:30 PM TO 10:00 PM



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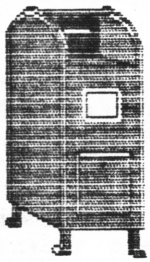

MAIL ANY INFORMATION YOU WANT TO BE INCLUDED IN THE NEWS LETTER TO:

JACK BARONE
141 ONTARIO ST.
ALBANY, N.Y.
12206

ANY TYPE INFORMATION, PROGRAMS, HINTS, TECHNICAL INFORMATION OR ANYTHING OF INTEREST THAT YOU WANT TO SEND IN SHOULD BE TYPED. IF YOU SEND IN FREE HAND DRAWINGS I WILL TRY TO REPRODUCE THEM FOR THE NEWS LETTER. ANY COMMENTS ON IMPROVING THE LETTER WILL BE APPRECIATED.

THE INFORMATION IN THIS NEWSLETTER MAY BE REPRODUCED UNLESS OTHERWISE NOTED. FEEL FREE TO WRITE TO US FOR MORE INFORMATION

OUR CLUB MEETINGS ARE HELD AT THE CAPITAL DISTRICT PSYCHIATRIC CENTER ROOM 37. THE CENTER IS AT 75 NEW SCOTLAND AVENUE NEXT DOOR TO THE ALBANY MEDICAL CENTER. ALL USERS OF ANY TIMEX/SINCLAIR COMPUTER EQUIPMENT ARE WELCOME.

OUR NEWSLETTER IS PRINTED ONCE A MONTH AND MAILED TO OUR MEMBERS AND CLUBS. DUES ARE $6.00 A YEAR. CONTACT FRED LEWIS OR JACK BARONE FOR MORE INFORMATION.

CLUB NEWS

Fred Lewis had a video tape of a Mandelbrot demonstration in color. The tape was animated and was enjoyed by all the members. We received a set of disks from Bob Swogger of the Chicago club which is an updated version of the operating system for the Larkin disk drive for the T/S2068. I don't have any way to run them, so I sent the disks to Peter Hyman to evaluate. When Peter has checked them out, we will print a reveiw of the system. Please return any of the newsletters from other clubs so we can redistribute them.

MC68000 CPU. (CONTINUED)

This month is the conclusion of the instruction set for the MC68000 CPU. BCD operations, program control operations and system control operations complete the set. Arithmetic operations on binary coded decimal numbers use the following iinstructions: ABCD - add decimal with extend, SBCD - subtract decimal with extend, NBCD - negate decimal with extend.

BCD OPERATIONS		
INST.	OP. SIZE	OPERATION
ABCD	8	Dx10+Dx10+X→Dx -(Ax)10+-(Ay)10+ X→(Ax)
SBCD	8	Dx10-Dy10-X→Dx -(Ax)10--(Ay)10- X(Ax)
NBCD	8	0-(EA)10-X→(EA)

Program control operations use a series of conditional and unconditional branch instructions, jump instructions and return instructions. Conditional instructions provide setting and branching for the following conditions.

(CONT.)

CC - CARRY CLEAR
CS - CARRY SET
EQ - EQUAL
F - NEVER TRUE
GE - GREATER OR EQUAL
GT - GREATER THAN
HI - HIGH
LE - LESS OR EQUAL
LS - LOW OR SAME
LT - LESS THAN
MI - MINUS
NE - NOT EQUAL
PL - PLUS
T - ALWAYS TRUE
VC - NO OVERFLOW
VS - OVERFLOW

PROGRAM CONTROL OPERATIONS	
INST.	OPERATION
COND. Bcc	Branch conditionally (14 conditions) 8 and 16 bit displacement
DBcc	Test condition, Decremen and branch. 16 bit displacement
Scc	Set byte conditonally (16 conditions)
UNCON BRA	BRANCH ALWAYS 8 & 16 BIT DISPLACEMENT
BSR	BRANCH TO SUBROUTINE 8 &16 BIT DISPLACEMENT
JMP	JUMP
JSR	JUMP TO SUBROUTINE
RE-TURN RTR	RETURN AND RESTORE CONDITION CODES
RTS	RETURN FROM SUBROUTINE

System control operation use privileged instructions, trap generating instructions and instructions that use or modify the status register.

CONTINUED ON PAGE 3

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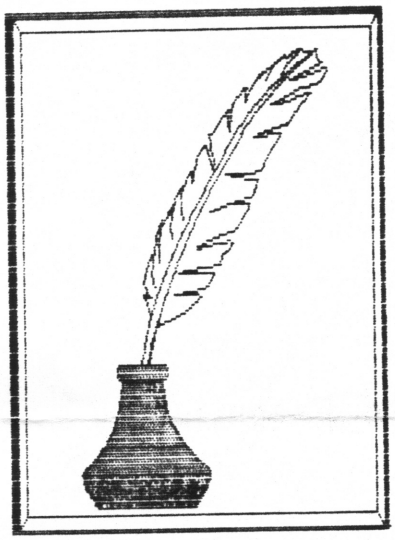
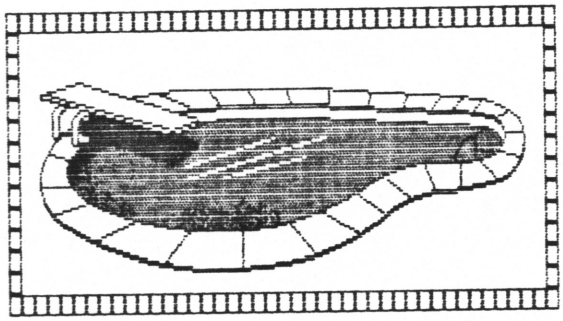
MC68000 CPU (CONTINUED)

SYSTEM CONTROL OPERATIONS	
INSTRUCT	OPERATION
PRIVILEGED	
ANDI TO SR	LOGICAL AND TO STATUS REGISTER
EORI TO SR	LOGICAL EOR TO STATUS REGISTER
MOVE EA TO SR	LOAD NEW STATUS REGISTER
MOVE USP	MOVE USER STACK POINTER
ORI TO SR	LOGICAL OR TO STATUS REGISTER
RESET	RESET EXTERNAL DEVICES
RTE	RETURN FROM EXCEPTION
STOP	STOP PROGRAM EXECUTION
TRAP GENERATING	
CHK	CHECK DATA REGISTER AGAINST UPPER BOUNDS
TRAP	TRAP
TRAPV	TRAP ON OVERFLOW
STATUS REGISTER	
ANDI TO CCR	LOGICAL AND TO CONDITION CODES
EORI TO CCR	LOGICAL EOR TO CONDITION CODES
MOVE EA TO CCR	LOAD NEW CONDIT: CODES
MOVE SR TO EA	STORE STATUS REGISTER
ORI TO CCR	LOAD OR TO CONDITION CODES

HERE IS SOME MORE PASTE ART





IMPORTANT DATES IN SEPTEMBER

1	SEPT.	1939	WORLD WAR BEGINS
2	"	1945	VJ DAY
9	"		GRANDPARENTS DAY
13	"	1814	STAR SPANGLED BANNER WRITTEN
17	"	1787	CONSTITUTION ADOPTED
20	"		ROSH HASHANA
29	"		YOM KIPPUR

SEE
YOU
ALL
AT
THE
NEXT
MEETING